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EXAMINER

MM91/0307
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ART UNIT	PAPER NUMBER
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2861
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/525,477

Applicant(s)
Miyazawa

Examiner
Judy Nguyen

Group Art Unit
2861



☒ Responsive to communication(s) filed on Feb 12, 2001

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-59 is/are pending in the application.

Of the above, claim(s) 7-10, 29-37, 40-45, and 47-57 is/are withdrawn from consideration.

☒ Claim(s) 58 and 59 is/are allowed.

☒ Claim(s) 1-6, 11-28, 38, 39, and 46 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3, 7, 12

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAIL ACTION

Election/Restriction

1. Applicant's election of Group I, Species I in Paper No. 13 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 7-10, 29-37, 40-45, 47-57 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic. Election was made **without** traverse in Paper No. 13.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the movable membrane arranged in parallel to a vertical plane **parallel** to a direction in which the carriage is moved (claim ⁵8) and parallel to a direction in which the carriage is moved and in parallel to a vertical plane (claim 15) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

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Specification

4. The disclosure is objected to because of the following informalities:

- * "upper surface **21**" (page 8, line 20) should be -- upper surface **20**--; "21" is an air open port
- * "the recording head **9**" (page 14, lines 4, 6) should be --the recording head **4**--; "9" is an ink inlet.

Appropriate correction is required.

Claim Objections

5. Claim 11 is objected to because of the following informalities: "**an** range" should be --**a** range--.

Appropriate correction is required.

Claim Rejections - 35 U.S.C. § 112

6. Claims 1-6, 11-28, 38, 39, 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The followings are not positively recited, i.e. it is unclear where they come from: "a carriage" and "a valve

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seat" (claim 1); "a container" (claim 2); "a valve seat", "a container" and "an ink supply port" (claim 12); "a holder" (claim 17). Therefore, it is unclear whether they are intended to be part of the claimed combination.

The followings lack proper antecedent basis, therefore, not positively recited: "said containers" (claim 4, line 5), "the casing" (claim 6), "said casing" (claim 18).

Claim 6 - since the casing is not positively recited, it is consider not part of the claimed device. Therefore, it is unclear how "a main tank" can be in the device according to claim 2 when it is installed on a side of the casing which is not part of the claimed device. Furthermore, it is unclear how ink can be supplied to the container via a conduit when it is unclear where the ink or the conduit come from.

Claim 16 - It is unclear what the different between "a disc-like elastic membrane member" recited in claim 16 and "a movable membrane" recited in claim 12, which claim 16 is depended therefrom. It appears that they are one of the same. Similarly, what the different between "a coil spring" in claim 12 and the one in claim 16?

Claim 17 - "a holder" is not positively recited and has not been structurally defined. Hence, it is unclear how the membrane receives pressure of the spring by way of such holder.

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Claim 25 - It is unclear what the different between "a movable part" recited in claim 25 and the one recited in claim 22 or claim 24 which claim 25 is depended therefrom. It appears that they are one of the same.

Claim 46 - It is unclear how a film member can have both gas permeability and repellent property. It appears that they are contradict with each other.

The remaining claims, not specifically mentioned, are directly/indirectly depended on one of the above rejected claims, hence, they are also rejected under 35 U.S.C. 112, accordingly.

Claim Rejections - 35 U.S.C. § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.
8. Claims 1-6, 12-15, 17-19, 20, 21, 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Iida (US 6,000,788).

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Iida discloses all elements of the claimed invention:

- * an ink-jet recording head (101)
- * an ink supply means (9') as a differential pressure valve including a coil spring (21) and a movable membrane (3)
- * a valve seat (8)
- * an in supply port (2)
- * a container (1)
- * a capillary (31) having a groove sealed by a film (33).

Please note, in view of the 35 U.S.C. 112 rejection, the non-positively recited elements are considered as not part of the combination and would not further limit the claims. Therefore, the particular arrangement as recited in the claims with respect to the non-positively recited elements are considered as an intended use which are not further the claimed invention.

Claim Rejections - 35 U.S.C. § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

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ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Iida in view of Ims (US 5,136,305).

Iida discloses all basic elements of the claimed invention except for:

- * an ink injection port provided to the container
- * ink supplementing means.

However, Ims discloses:

- * an ink injection port (clearly illustrates in Figure 2) provided to a container (18)
- * ink supplementing means (28).

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the aforementioned features as taught by Ims in the teaching of Iida for the purpose of supplying ink to the container.

11. Claims 22-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Iida.

Iida discloses all basic elements of the claimed invention except for:

- * a particular structure of the movable membrane.

However, it is noted that the particular structure of the membrane as recited in the claim are merely directed to various different shapes of the membrane. Furthermore, it has been held that changing the configuration of a claimed element was a matter of choice which a person of ordinary skill in the art would have found obvious when absent of a persuasive evidence that the particular configuration of the claimed element was significant. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)}. Hence, it is considered arbitrary to use any shape including the one that suggested in the claims when consider Iida as a whole since the intended result, e.g. pressurizing the ink supply, as defined by the claims also achieves by Iida.

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12. Claims 38 and 39 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Iida in view of Fong et al (US 5,280,300).

Iida discloses all basic elements of the claimed invention except for:

- * an ink injection port provided to the container
- * a passage.

However, Fong et al discloses:

- * an ink injection port (at 32) provided to a container
- * a passage (20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include the aforementioned features as taught by Fong et al in the teaching of Iida for the purpose of reserving ink.

Allowable Subject Matter

13. Claims 58 and 59 are allowed.
14. Claim 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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15. The following is a statement of reasons for the indication of allowable subject matter: the limitation of a biasing spring by which the stationary valve part and the movable valve part, having an elastically deformable membrane with a through hole, are biased against each other in the combination as claimed cannot be made inherent nor obvious by the prior art of record.
16. Any inquiry concerning this communication from the examiner should be directed to Examiner Judy Nguyen whose telephone number is (703) 305-7062. An inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 308-0956.



Judy Nguyen